

What is Claimed Is:

1. A test set for testing the operation of a wireless telephone in a wireless communication network comprising a plurality of mobile switching centers each providing wireless communications in respective service areas through a plurality of base stations, the test set being for location in one of the  
5 respective service areas, wherein:

the test set is enabled to communicate with a central test control center;

the test set comprises:

(a) a wireless telephone for wireless communication with at least one of the base stations, the wireless telephone having a display;

10 (b) a controller coupled to the wireless telephone for control of the wireless telephone, the controller also being coupled to the data link for communication with the central test control center for receiving test instructions from the center and supplying test result data to the center; and

(c) a video capturing device visually coupled to the display of the  
15 wireless telephone, for capturing data from the display relating to operations of the wireless telephone and supplying the captured data to the controller,

the controller processing the captured data to recover information output from the wireless telephone via the display, for inclusion in the test result data,

the test set is arranged to receive instruction from the central test control  
20 center to initiate an operation through a base station and a mobile switching center to attempt to access a predetermined service feature of the wireless communication network.

2. A test set, wherein:

the test set tests the operation of a wireless device in a wireless network;

the test set is enabled to communicate with a central test control center through a data link coupled to the test set;

5 the test sets comprises:



7. The test set of claim 3, wherein the video capturing device is arranged proximate to the display.

8. The test set of claim 3, wherein the video capturing device is arranged to detect data output on the display.

9. The test set of claim 8, wherein data output on the display comprises at least one of date indications, time indications, type of service indications, voice mail indications, caller ID indications, text messages, and wireless internet services.

10. The test set of claim 3, wherein the video capturing device is a CCD camera.

11. The test set of claim 3, wherein the wireless communication device is a digital telephone.

12. The test set of claim 3, wherein the wireless communication device is an analog telephone.

13. A method of testing the operation of a wireless telephone in a wireless communication network, wherein:

the wireless telephone network comprises a plurality of mobile switching centers each providing wireless communications in respective service areas through a plurality of base station;

a test set is located in one of the respective service areas;

a data link is coupled to the test set for enabling communication between a central test control center and the test set;

the test set comprises a wireless telephone for wireless communication with at least one of the base stations, wherein the wireless telephone comprises a display;

the test set comprises a controller that is coupled to the wireless telephone and to the data link, wherein the controller controls the operation of the wireless telephone according to data received by the data link;

- 15        the test set comprises a video capturing device visually coupled to the display of the wireless telephone, wherein the video capturing device is coupled to the controller;

the method comprises the following steps:

- (a) initiating an operation through at least one base station and at  
20    least one mobile switching center to attempt to access a predetermined service feature of the wireless telephone;

(b) capturing data from the display of the wireless telephone;

- (c) recovering information by the controller that is output from the wireless telephone via the display by processing the captured data to recover  
25    information output from the wireless telephone via the display; and

(d) supplying test result data to the central test control center according to the recovered information by the controller.

14.    A method as in claim 12, further comprising the step of comparing the test result data at the central test control center with expected result data.

15.    A method as in claim 13, wherein the initiating step is responsive to receipt of test instructions at the test set from the central test control center.

16.    A method of testing the operation of a wireless communication device in a wireless network, wherein:

- the wireless network comprises a plurality of mobile switching centers each providing wireless communications in respective service areas through a  
5    plurality of base stations;

a test set is located in one of the respective service areas;

a data link is coupled to the test set for enabling communication between a central test control center and the test set;

the test set comprises the wireless communication device for wireless  
10 communication with at least one of the base stations;

the test set comprises a video capturing device visually coupled to the wireless communication device;

the method comprises the following steps:

(a) initiating an operation of the wireless communication device  
15 through at least one base station and at least one mobile switching center;

(b) capturing data using the video capturing device from the wireless communication device; and

(c) supplying test result data to the central test control center related to the captured data.

17. A method as in claim 16, further comprising the step of comparing the test result data at the central test control center with expected result data.

18. A method in claim 16, wherein the initiating step is responsive to receiving of test instructions at the test set from a central test control center.

19. A method of testing a wireless service feature, comprising the steps of:

causing a wireless communication device to interact with a wireless communication network in an attempt to utilize the wireless service feature;

5 reading information from the wireless communication device relating to the attempt, using a video capturing device visually coupled to a display of the wireless communication device; and

determining if the wireless service feature is functioning through the wireless communication device based on the information read from the wireless  
10 telephone.

20. The method of claim 19, comprising the further step of reprogramming the wireless communication device prior to using the video capturing device.

21. The method of claim 20, wherein the wireless communication device is reprogrammed by a controller that is electrically coupled to the wireless communication device.

22. The method of claim 19, comprising the further step of the wireless communication device receiving a wireless signal, wherein:

at least part of the information contained in the wireless signal originated from a central test control center;

5 the video capturing device is electrically coupled to a controller;  
the controller is in communication with the central test control center.

23. The method of claim 22, wherein the communication with the central test control center is wireless communication.

24. The method of claim 22, wherein the communication with the central test control center is wireline communication.

25. The method of claim 22, comprising the further step of reading information from the wireless communication device using a microphone prior to the step of determining if a wireless device feature is functioning, wherein the microphone is electrically coupled to the controller.

26. The method of claim 22, comprising the further step of sending an audio signal to the wireless communication device from a speaker proximate to the wireless communication device, prior to the step of determining if a wireless device feature is functioning, wherein:

5 the speaker is electrically coupled to the controller;

at least part of the information contained in the audio signal originated from the central test control center; and

at least part of the information contained in the audio signal is test information to test a wireless device feature.

27. The method of claim 22, wherein the wireless device feature is a voice activation feature.

28. The method of claim 19, wherein the method tests the operation of the wireless communication network.

29. The method of claim 19, wherein the method tests the operation of the wireless communication device.

30. A test system for testing operations in a wireless communication network comprising a plurality of mobile switching centers each providing wireless communications in respective service areas through a plurality of base stations, the test system comprising:

5 a plurality of test sets, wherein at least one of the test sets is located in each of the respective service areas;

a central test control center;

a plurality of data links coupled to the test sets, for enabling communication between the central test control center and the test sets;

10 each of the test sets comprising:

(a) a wireless telephone for wireless communication with at least one of the base stations, the wireless telephone having a display;

(b) a controller coupled for control of the wireless telephone, the controller also being coupled to one of the data links for communication with the  
15 central test control center for receiving test instructions from the central test control center and supplying test result data to the central test control center; and

(c) a video capturing device visually coupled to the display of the wireless telephone, for capture data from the display relating to operations of the wireless telephone and supplying the captured data to the controller,

20       the controller processing the captured data to recover information output from the wireless telephone via the display, for inclusion in the test result data,

          wherein the central test control center instructs the test set to initiate an operation through a base station and a mobile switching center to attempt to access a predetermined service feature of the wireless communication network,  
25       and during the operation, the controller supplies test result data including data captured from the display of the wireless telephone, the test result data relating to the attempt to access the predetermined feature through one of the mobile switching centers for comparison to expected result data.

31.    A test system for testing operations in a wireless network comprising a plurality of mobile switching centers each providing wireless communications in respective service areas through a plurality of base stations, the test system comprising:

5       a test set that comprises a wireless communication device and tests the operation of the wireless communication device in a wireless network, wherein the wireless communication device is in wireless communication with at least one base station of the wireless network;

          a data link that is coupled to the test set, for enabling communication  
10       between a central test control center and the test sets;

          a controller, as part of the test set, coupled to the wireless communication device for control of the wireless device, the controller also being coupled to the data link; and

          a video capturing device, as part of the test set, visually coupled to the  
15       wireless communication device for capturing visual data from the wireless communication device and supplying the captured visual data to the controller,



wherein the controller processes the captured data to recover information output from the wireless device.

32. A test system for testing a wireless device, comprising:  
 a wireless communication device comprising a control unit, a display, a keypad, a speaker, and a microphone;  
 a controller electrically coupled to the wireless communication device;  
 5 and  
 a video capturing device electrically coupled to the controller, wherein the video capturing device is arranged to capture visual output data from the display of the wireless communication device.

33. The test system of claim 32, wherein the controller is in wireless communication with a central test control center.

34. The test system of claim 32, wherein the controller is in wireline communication with a central test control center.

35. The test system of claim 32, further comprising:  
 a test speaker electrically connected to the controller and arranged to send auditory signals to the wireless communication device; and  
 a test microphone electrically coupled to the controller and arranged to  
 5 receive auditory signals from the wireless communication device.

36. The test system of claim 32, wherein the wireless communication device can be substituted by a second wireless communication device without hardwiring.

37. The test system of claim 32, wherein the wireless communication device is modular and detachable from the controller.

38. The test system of claim 32, wherein the video capturing device is arranged proximate to the display.

39. The test system of claim 38, wherein the video capturing device is arranged to detect data output on the display of the wireless communication device.

40. The test system of claim 39, wherein the data output on the display comprises one of date indications, time indications, type of service indication, voice mail indications, caller ID indications, text messages, and wireless internet services.

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